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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/179,872

10/28/1998

PAN-JIN KIM

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STAAS & HALSEY LLP

SUITE 700

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EXAMINER

BROWN, RUEBEN M

ART UNIT

PAPER NUMBER

2424

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DELIVERY MODE

03/30/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/179,872	<b>Applicant(s)</b> KIM ET AL.	
	<b>Examiner</b> REUBEN M. BROWN	<b>Art Unit</b> 2424	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4-6,17 and 27-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-6,17 and 27-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                     |                                                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                         | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 17 & 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vancelette, (U.S. Pat # 5,894,320), in view of Morrison, (U.S. Pat # 5,900,915).

Considering claims 1 & 17, the amended claimed method for displaying channel information on a digital TV for receiving digital multichannel TV broadcasting, comprising

*'changing a current channel to a demanded major channel in response to a demand to change a major channel'*, is met by the disclosure of Vancelette that teaches a customer selecting a primary channel, which is transmitted/delivered on a particular RF channel, see col. 10, lines 21-35.

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As for the amended claimed feature of *'displaying on a TV screen, as a viewing program, a program of a minor channel received through the demanded major channel'*, Vancelette teaches that the minor channel selected by the viewer is displayed on a TV screen, see col. 10, lines 10-56.

Regarding the additionally recited, *'displaying on the TV screen, minor channel numbers of programs received through the demanded major channel'*, Vancelette teaches that a plurality of minor channels may be received through a primary channels, col. 4, lines 6-15; col. 6, lines 5-50; col. 7, lines 25-67. Even though Vancelette discloses that the user is enabled to choose from a plurality of minor channels, see col. 6, lines 1-15, the reference does not discuss displaying the channel numbers of the alternate programming for the viewer.

Morrison provides a teaching of receiving and displaying viewing programs received as a minor channel, received through a demanded major channel, see col. 3, lines 50-55. In particular, Morrison discloses that "referring to Fig. 2, the viewer is currently watching "Seinfeld" on channel 105A". It is pointed out that 105A is a minor channel number, received through the major channel number 105. Since Morrison teaches that the viewer is currently watching "Seinfeld", the claimed feature *'displaying on a TV screen, as a viewing program, a program of a minor channel received through the demanded major channel'* of is also met by the Morrison.

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Morrison goes on to show that the plurality of other displayed minor channel numbers that are received through the major channel numbers, i.e., 105B; 105C; 105D (see Fig. 2; Fig. 3). It is noted that “Seinfeld” is highlighted, since that is the video program that the viewer is currently watching. Thus, while the viewer in Morrison is viewing a video program of a minor channel number, the viewer may also view the channel numbers of the instant minor channel number on the TV screen, as well as the other minor channel numbers received through the instant major channel number, which meets the claimed subject matter.

Therefore, Morrison meets the additionally claimed subject matter, *‘displaying on the TV screen, minor channel numbers of programs received through the demanded major channel’ ... ‘wherein the displayed minor channel numbers comprise at least one minor channel number corresponding to a program of a minor channel which is not currently being displayed on the digital TV’.*

As for the specifics of displaying the channel number on a *‘digital television screen’*, Vancelette appears to operate by converting the digital TV signal to an analog signal. Nevertheless, Morrison is directed to displaying video programming in a digital TV system that receives video programming on digital channels, col. 3, lines 34-65 & Fig. 1, which meets the claimed subject matter.

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Considering claim 17, the claimed apparatus and device for displaying channel information on a digital TV, comprising elements that correspond with subject matter mentioned above in the rejection of claim 1, are likewise treated.

Considering claim 27, Vancelette operates outside of an EPG environment. Therefore, the viewer in Vancelette changes channels outside of an EPG environment.

Considering claim 28, the claimed feature of '*automatically displaying*' is broad enough to read on displaying the video programming in Vancelette & Morrison, automatically, after the instant video programming has been selected by the user.

Considering claim 29, Vancelette teaches that the plurality of digital channels are multiplexed together and modulated on a single RF channel, col. 8, lines 21-45, which meets the claimed subject matter. Also, in Morrison, all of the minor channel numbers are received through the same major number, i.e., 105. Specifically, Morrison discusses, "Note that all four channels (105A, 105B, 105C, 105D) are highlighted because the movie is broadcast on HDTV using all of the available bandwidth reserved for channel 105". Therefore, the available bandwidth of the major channel number 105 can be used to transport four minor channels of video programming, or alternatively one channel of HDTV formatted programming.

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5. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vancelette, & Morrison, further in view of Etheredge, (U.S. Pat # 6,172,674).

Considering claims 4 & 6, Vancelette & Morrison do not teach hiding the major or minor channel numbers after a prescribed time has elapsed. Nevertheless, Etheredge provides a disclosure of removing a particular pop-menu that has been activated by the user, after a certain time, if a channel selection or menu item selection has not been made, (col. 13, lines 26-50; col. 14, lines 4-40; col. 15, lines 10-25). It would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify the combination of Vancelette & Morrison with the technology taught by Etheredge, at least for the known advantage of reducing the amount of extraneous information displayed to the viewer, since after a certain amount of time it may be assumed that the viewer is no longer interested in making a channel change from the menu displayed on the TV screen.

Considering claim 5, the claimed subject matter reads on Fig. 2 of Morrison that shows that the user is displayed the list of minor channel numbers after a minor channel number has been tuned/ i.e., selected by the user.

***Response to Arguments***

3. Applicant's arguments filed 12/30/2009 have been fully considered but they are not persuasive. With respect to claim 1, applicant argues on page 5, that "the channels 105A to 105D are not minor channels for a certain channel. The channels 105A to 105D may be individually used as independent channels or may be used a single channel according to the data size of a transmission program". Examiner respectfully disagrees with this line of argument. Morrison explicitly explains how the system works. Col. 3, lines 23-64, says "Prior to that time period the broadcaster had partitioned the bandwidth into four separate channels (105A,105B,105C,105D) in which four separate programs aired from 1:00 to 1:30...",... "Note that all four channels are highlighted because the movie is being broadcast on HDTV and using all of the available bandwidth reserved for channel 105". Therefore, Morrison teaches a single channel (e.g., Ch 105) that is either partitioned to provide four programs or is kept together to provide a single HDTV program. Thus, the channels 105A-105D are minor channels of the major channel 105.

The only feature lacking in Vancelette, is actually showing the channel numbers of the minor channels. Morrison provides an obvious modification of Vancelette, by showing the actual channel numbers of the minor channels.



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4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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**Any response to this action should be mailed to:**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**or faxed to:**

(571) 273-8300, (for formal communications intended for entry)

**Or:**

(571) 273-7290 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reuben M. Brown whose telephone number is (571) 272-7290. The examiner can normally be reached on M-F (9:00-6:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (571) 272-7331. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300 for regular communications and After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Annan Q Shang/  
Primary Examiner, Art Unit 2424